

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) An optical disk capable of recording or reproducing information with a lightbeam of an optical head having an objective lens, comprising:

a first recording area in which ~~the~~ first information can be recorded by the optical head; and

a second recording area in which second ~~information of the optical head~~ is recorded ~~in order to record the information on the optical disk,~~

wherein the second information of the optical head includes RIM intensity, defined as a relationship between a numerical aperture of the objective lens and an intensity distribution of the lightbeam, and information usable for calculation of laser power for recording in order to record the first information on the optical disk, and is recorded in a recording region preceding a region in which information showing laser power for reading is recorded.

2. (Amended) An optical disk according to claim 1, wherein the second ~~information of the optical head includes RIM intensity~~ is recorded in the recording region as a pre-pit.

Claims 3-4 (Canceled).

5. (New) An optical disk apparatus comprising:

an optical head device including a light source which outputs a light beam having a predetermined wavelength, a collimating lens of an optical element which guides and focuses the light beam from the light source to a predetermined recording area of a recording medium, and an objective lens which focuses the light beam at a predetermined position of the recording medium;

a program retaining device in which a control program for reading out information concerning intensity of the light beam for recording the information on the recording medium, reproducing the information from the recording medium, or erasing the information recorded in the recording medium is recorded in a recording region preceding the region in which information showing laser power for reading is recorded, the information being defined by a focal distance of the collimating lens, a wavelength and a spread angle of the light beam from the light source, and a numerical aperture NA and the focal distance of the objective lens; and

a light source driving device which reads out the intensity of the light beam from the recording medium according to the control program recorded in the program retaining device and optimizes the intensity of the light beam from the light source.

6. (New) A method for reproducing data in an optical disk with a laser beam from an optical head having an objective lens, comprising:

setting power of the laser beam to be for non-recording use and non-erasing use;

acquiring RIM intensity, defined as a relationship between a numerical aperture of the objective lens and an intensity distribution of the laser beam, from a data region provided in an inner radius direction of the optical disk, the RIM intensity being recorded in the data region preceding a region in which information showing laser power for reading is recorded; and

acquiring data concerning said non-recording use and non-erasing use to set non-recording and non-erasing power.

7. (New) A method for recording data in an optical disk with a laser beam from an optical head having an objective lens, comprising:

setting power of the laser beam to be for non-recording use and non-erasing use;

acquiring RIM intensity, defined as a relationship between a numerical aperture of the objective lens and an intensity distribution of the laser beam, from a data region provided in an inner radius direction of the optical disk, the RIM intensity being recorded in the data region preceding a region in which information showing laser power for reading is recorded; and

acquiring data concerning recording use and erasing use to set recording and erasing laser power.